What is claimed is:

1. The use of a radiation-curable resin essentially comprising

A) at least one carbonyl-hydrogenated ketone-aldehyde resin

and/or

B) at least one ring-hydrogenated phenol-aldehyde resin

and

C) at least one compound comprising at least one ethylenically unsaturated moiety having at the same time at least one moiety which is reactive toward A) and/or B),

as a main component, base component or additional component in radiation-curing coating materials, adhesives, inks, including printing inks, polishes, varnishes, pigment pastes and masterbatches, fillers, sealants and insulants and/or cosmetic articles.

2. The use of a radiation-curable resin obtained by polymer-analogously reacting

A) at least one carbonyl-hydrogenated ketone-aldehyde resin

and/or

B) at least one ring-hydrogenated phenol-aldehyde resin

with

C) at least one compound comprising at least one ethylenically unsaturated moiety and at the same time at least one moiety which is reactive toward A) and/or B),

as a main component, base component or additional component in radiation-curing coating materials, adhesives, inks, including printing inks, polishes, varnishes, pigment pastes and masterbatches, fillers, sealants and insulants and/or cosmetic articles.

3. The use of a radiation-curable resin as claimed in claim 1 or 2, obtained by polymer-analogously reacting

A) at least one carbonyl-hydrogenated ketone-aldehyde resin

and/or

B) at least one ring-hydrogenated phenol-aldehyde resin

with

C) at least one compound comprising at least one ethylenically unsaturated moiety and at the same time at least one moiety which is reactive toward A) and/or B), and at least one further hydroxyl-functionalized polymer.

4. The use of a radiation-curable resin as claimed in claim 3, wherein polyethers, polyesters and/or polyacrylate are used as further hydroxy-functional polymers.

5. The use of a radiation-curable resin as claimed in claim 3 or 4, wherein mixtures of the further polymers with the ketone-aldehyde resins A) and/or phenol-aldehyde resins B) are reacted polymer-analogously with component C).

6. The use of a radiation-curable resin as claimed in claim 3 to 5, wherein first of all adducts of the ketone-aldehyde resins A) and/or phenol-aldehyde resins B) with the further polymers, using suitable di- and/or triisocyanates, are prepared, and these adducts are then reacted polymer-analogously with component C).

7. The use of a radiation-curable resin as claimed in at least one of the preceding claims, wherein C-H-acidic ketones are used in component A).

8. The use of a radiation-curable resin as claimed in at least one of the preceding claims, wherein ketones selected from acetone, acetophenone, methyl ethyl ketone, heptan-2-one, pentan-3-one, methyl isobutyl ketone, tert-butyl methyl ketone, cyclopentanone, cyclododecanone, mixtures of 2,2,4- and 2,4,4-trimethylcyclopentanone, cycloheptanone, cyclooctanone, and cyclohexanone are used as starting compounds, alone or in mixtures, in the carbonyl-hydrogenated ketone-aldehyde resins of component A).

9. The use of a radiation-curable resin as claimed in at least one of the preceding claims, wherein alkyl-substituted cyclohexanones having one or more alkyl radicals containing in total 1 to 8 carbon atoms are used, individually or in a mixture, in the carbonyl-hydrogenated ketone-aldehyde resins of component A).

10. The use of a radiation-curable resin as claimed in claim 9, wherein 4-tert-amylcyclohexanone, 2-sec-butylcyclohexanone, 2-tert-butylcyclohexanone, 4-tert-butylcyclohexanone, 2-methylcyclohexanone, and 3,3,5-trimethylcyclohexanone are used in the carbonyl-hydrogenated ketone-aldehyde resins of component A).

11. The use of a radiation-curable resin as claimed in at least one of the preceding claims, wherein acetophenone, cyclohexanone, 4-tert-butylcyclohexanone, 3,3,5-trimethyl-cyclohexanone, and heptanone, alone or in a mixture, are used in the carbonyl-hydrogenated ketone-aldehyde resins of component A).

12. The use of a radiation-curable resin as claimed in at least one of the preceding claims, wherein formaldehyde, acetaldehyde, n-butyraldehyde and/or isobutyraldehyde, valeraldehyde, and dodecanal, alone or in mixtures, are used as aldehyde component of the carbonyl-hydrogenated ketone-aldehyde resins in component A).

13. The use of a radiation-curable resin as claimed in claim 12, wherein formaldehyde and/or paraformaldehyde and/or trioxane are used as aldehyde component of the carbonyl-hydrogenated ketone-aldehyde resins in component A).

14. The use of a radiation-curable resin as claimed in claim 1, 2 or 3, wherein hydrogenation products of the resins formed from acetophenone, cyclohexanone, 4-tert-butylcyclohexanone, 3,3,5-trimethylcyclohexanone, and heptanone, alone or in a mixture, and formaldehyde as component A) are used.

15. The use of a radiation-curable resin as claimed in any one of the preceding claims, wherein the aldehydes formaldehyde, butyraldehyde and/or benzaldehyde are used in the ring-hydrogenated phenol-aldehyde resins (component B).

16. The use of a radiation-curable resin as claimed in any one of the preceding claims, wherein nonhydrogenated phenol-aldehyde resins are used to a minor extent.

17. The use of a radiation-curable resin as claimed in any one of the preceding claims, wherein ring-hydrogenated resins based on alkyl-substituted phenols are used in component B).

18. The use of a radiation-curable resin as claimed in claim 17, wherein 4-tert-butylphenol, 4-amylphenol, nonylphenol, tert-octylphenol, dodecylphenol, cresol, xylenols, and bisphenols, alone or in mixtures, are used.

19. The use of a radiation-curable resin as claimed in at least one of the preceding claims, wherein maleic acid is used as component C).

20. The use of a radiation-curable resin as claimed in at least one of the preceding claims, wherein (meth)acrylic acid and/or derivatives are used as component C).

21. The use of a radiation-curable resin as claimed in claim 20, wherein (meth)acryloyl chloride, glycidyl (meth)acrylate, (meth)acrylic acid and/or the low molecular mass alkyl esters and/or anhydrides thereof, alone or in a mixture, are used as component C).

22. The use of a radiation-curable resin as claimed in at least one of the preceding claims, wherein isocyanates which possess an ethylenically unsaturated moiety, preferably (meth)acryloyl isocyanate, α,α-dimethyl-3-isopropenylbenzyl isocyanate, (meth)acryloylalkyl isocyanate with alkyl spacers possessing 1 to 12, preferably 2 to 8, more preferably 2 to 6 carbon atoms, preferably methacryloylethyl isocyanate and/or methacryloylbutyl isocyanate, are used as component C).

23. The use of a radiation-curable resin as claimed in at least one of the preceding claims, wherein reaction products of hydroxyalkyl (meth)acrylates whose alkyl spacers possess 1 to 12, preferably 2 to 8, more preferably 2 to 6 carbon atoms with diisocyanates are used as component C).

24. The use of a radiation-curable resin as claimed in claim 23, wherein diisocyanates

selected from cyclohexane diisocyanate, methylcyclohexane diisocyanate, ethylcyclohexane diisocyanate, propylcyclohexane diisocyanate, methyl-diethylcyclohexane diisocyanate, phenylene diisocyanate, tolylene diisocyanate, bis(isocyanatophenyl)methane, propane diisocyanate, butane diisocyanate, pentane diisocyanate, hexane diisocyanate such as, for example, hexamethylene diisocyanate (HDI) or 1,5-diisocyanato-2-methylpentane (MPDI), heptane diisocyanate, octane diisocyanate, 1,6-diisocyanato-2,4,4-trimethylhexane, 1,6-diisocyanato-2,2,4-trimethylhexane (TMDI), 4-isocyanatomethyloctane 1,8-diisocyanate (TIN), decane di- and triisocyanate, undecane di- and triisocyanate, dodecane di- and triisocyanates, isophorone diisocyanate (IPDI), bis(isocyanatomethylcyclohexyl)methane (H_{12}MDI), isocyanatomethylmethylcyclohexyl isocyanate, 2,5(2,6)-bis(isocyanatomethyl)-bicyclo[2.2.1]heptane (NBDI), 1,3-bis(isocyanatomethyl)cyclohexane (1,3-H_6-XDI), 1,4-bis(isocyanatomethyl)cyclohexane (1,4-H_6-XDI), alone or in mixtures, are used.

25. The use of a radiation-curable resin as claimed in claim 24, wherein polyisocyanates prepared by trimerizing, allophanatizing, biuretizing and/or urethaneizing simple diisocyanates are used.

26. The use of a radiation-curable resin as claimed in at least one of the preceding claims, wherein the reaction products in a molar ratio of 1:1 of hydroxyethyl acrylate and/or hydroxyethyl methacrylate with isophorone diisocyanate and/or H_{12}MDI and/or HDI are used as component C).

27. The use of a radiation-curable resin as claimed in at least one of the preceding claims, wherein 1 mol of the carbonyl-hydrogenated ketone-aldehyde resin and/or ring-hydrogenated phenol-aldehyde resin - based on M_n - and from 0.5 to 15 mol, preferably from 1 to 10 mol, in particular from 2 to 8 mol of the unsaturated compound are used.

28. The use of a radiation-curable resin as claimed in at least one of the preceding claims as a main, base or additional component in radiation-curing coating materials such as primers, surfacers, basecoat, topcoat, and clearcoat materials and also in radiation-

curing adhesives, inks, including printing inks, polishes, varnishes, pigment pastes and masterbatches, fillers, cosmetic articles and/or sealants and insulants.

29. The use of a radiation-curable resin as claimed in at least one of the preceding claims for metals, plastics, wood, paper, textiles, and glass and also mineral substrates.

30. The use of a radiation-curable resin as claimed in at least one of the preceding claims, wherein further oligomers and/or polymers are present.

31. The use of a radiation-curable resin as claimed in claim 30, wherein further oligomers and/or polymers selected from the group consisting of polyurethanes, polyesters, polyacrylates, polyolefins, natural resins, epoxy resins, silicone oils and silicone resins, amine resins, fluoro polymers and derivatives thereof are present, alone or in combination.

32. The use of a radiation-curable resin as claimed in at least one of the preceding claims, wherein auxiliaries and additives are present.

33. The use of a radiation-curable resin as claimed in claim 32, wherein auxiliaries and additives selected from inhibitors, organic solvents, with or without unsaturated moieties, surface-active substances, oxygen scavengers and/or free-radical scavengers, catalysts, light stabilizers, color brighteners, photoinitiators, photosensitizers, thixotropic agents, antiskinning agents, defoamers, dyes, pigments, fillers and/or dulling agents are present.